

Development and Validation of the Person-Centered Care Self-Assessment Tool (PCCSAT) Using Nursing Documentation Approach

Puziah Yusof^{1*}, Norbaini Malek²

ABSTRACT

OBJECTIVE: This study aims to develop a valid and reliable self-assessment instrument using a 5-point Likert scale that enables Registered Nurses (RNs) at KPJ Group of Hospitals utilize systematic self-reflection and evaluate the quality of their person-centred care documentation.

METHODOLOGY: This study employed a mixed-method design to develop and validate the Person-Centered Care Self-Assessment Tool (PCCSAT). It is part of a broader research measuring PCC documentation skills of RNs at KPJ Hospitals. Data were collected from March – May 2024. The item constructs were developed based on the McCormick PCC Documentation Framework and subsequently validated by a panel of four academic experts, who reviewed and provided feedback on their relevance, clarity, and comprehensiveness. The finalized instrument was then administered to a selected group of Registered Nurses (RNs) from KPJ Hospitals enrolled in the post-basic program on campus.

RESULTS: There are final 31 self-assessment items generated for PCCSAT. The pilot test involving 33 participants demonstrated good internal consistency, with a Cronbach's alpha of 0.965. However, due to the small sample size, these findings should consider preliminary, and additional validation with a larger sample is necessary.

CONCLUSION: The pilot test provides valuable insights into the reliability and validity of self-assessment PCC documentation instrument. The instrument has been revised based on the findings and now considered ready for deployment in the main study.

KEYWORDS: Person-Centred Care, Nursing Documentation, Quality of Care, Reflective Practice, Clinical Self-Assessment

INTRODUCTION

Background on Person-Centred Care

Person-Centred Care (PCC) is a care that respects and responsive to the individual patient's preferences, needs, and values that guide all clinical decisions¹. For example, doctors work collaboratively with patients to ensure treatment plans align with the patient's personal goals and lifestyle. Evidence shown it improve patient satisfaction, health outcomes, and quality of care²⁻³ and improve patient outcomes²⁻⁹. In Malaysia, PCC has been integrated in the policy of Ministry of Health (MOH)¹⁰ through concept such as, "Patient Friendly Hospitals" and 'partnership approach' to improve patient's experience. However, challenges exists in their fully implementation caused by various factors including high patient load and cultural diversity among population. Efforts to improve cultural competence and communication across languages and cultures are necessary to support the

successful implementation of PCC.¹¹

Evidence showed that PCC fosters a strong nurse-patient relationship ensuring more coordinated and continuous care^{11,14}. The basis for all these is proper documentation that supports PCC and its ability to capture a patient's comprehensive assessment, including their medical condition, values, social context, cultural background, and emotional well-being. This holistic view is essential as it provides the healthcare team with a complete understanding of the patient's needs beyond their clinical symptoms¹⁴⁻¹⁵. Proper documentation allow nurses align their interventions with patient best interest¹⁶, provide continuous evaluation and quality improvement¹⁷⁻¹⁸.

RATIONALE OF THE STUDY

While various tools are currently available to measure PCC, there is a lack of tools that measure PCC through nursing documentation. Many existing tools measuring PCC through clinical data, vital signs and diagnostics, ignoring the importance aspects of PCC such as patient preferences, values, and emotional well-being. Without an effective Self-Assessment Tool, nurses and other healthcare professionals may struggle to identify strengths and areas for improvement in their person-centred approach.

This study aims to develop and validate the Person-Centred Care Self-Assessment Tool (PCCSAT) to enable healthcare providers, particularly nurses, to

¹School of Nursing, KPJ Healthcare University, PT 17010, Persiaran Seriemas, Kota Seriemas, 71800, Nilai, Seremban, Negeri Sembilan, Malaysia.

²Nursing Services Department, KPJ Seremban Specialist Hospital, Lot 6219 & 6220, Jalan Toman 1, Kemayan Square, 70200, Seremban, Negeri Sembilan, Malaysia.

Correspondence: puziahhy@gmail.com
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measure and reflect on their PCC practices. The development of key constructs of PCCSAT informed by the Person-Centred Nursing Framework developed by Brendan McCormack and Tanya McCance.

OBJECTIVES OF THE STUDY

The objectives of this study are to develop and validate the Person-Centred Care Self-Assessment Tool (PCCSAT) specifically for nursing professionals at KPJ Group of Hospitals with the research questions:

1. What key dimensions of Person-Centred Care (PCC) should be included in a comprehensive self-assessment tool for nurses to reflect and assess their PCC documentation?
2. Is self-assessment of PCC through nursing documentation by the developed instrument reliable and valid?

METHODOLOGY

Study Design

This study employed mixed-method study design utilizing a two-phase methodological approach to develop and validate the Person-Centred Care Self-Assessment Tool (PCCSAT)³².

Methods of Data Collection:

Population and Sample

The population for this study comprised registered nurses involved in postbasic perioperative and critical care nursing programs at KPJ Healthcare University. For the panel experts, a total of five (5) professionals with extensive experience in nursing practice were selected to evaluate the tool's content validity.

While for the pilot test sample, it consisted of thirty-three (33) registered nurses, recruited through collaboration with the head of postbasic nursing program and the program coordinator.

Inclusion/Exclusion Criteria:

Inclusion criteria for the pilot test included nurses actively working in clinical practice, enrolled in the selected postbasic program, and willing to participate. While the exclusion criteria involved nurses who were not enrolled in the program or who are unwilling to participate in the study.

Data Collection Process:

Data collection process was conducted in two phases; content validation by panel experts and pilot test with registered nurses.

1. Content validation:

A 5-Likert scale evaluation form was distributed to five (5) panel experts to assess the relevancy of items, clarity, and comprehensiveness. Feedback was gathered and Content Validity Index (CVI) calculated.

2. Pilot Test:

Thirty-three (33) registered nurses participated after recruitment through collaboration with the head of postbasics nursing program and the program coordinator. Participants completed the instrument, and responses were analysed for clarity, feasibility, and reliability. Focus groups

were employed for qualitative feedback which consist of two groups, each comprising seven to eight RNs who participated in the pilot study.

Instrument:

PCCSAT Survey Tool

The PCCSAT (Patient -Centered Care Self-Assessment Tool) is a structured self-assessment instrument developed to measure registered nurses' perceptions and practices of patient-centered care (PCC). Preliminary, it consists of 43-items which further refined to 31-items.

The PCCSAT were organized into seven (7) key constructs adapted from McCormack's Nursing Documentation Framework (2017) as illustrated on **TABLE I**.

Table I: The Key Constructs and Items of PCCSAT

Key Constructs	Example of Items
Basic Nursing Knowledge	"I am knowledgeable about common medications, their mechanisms of action, side effects, and contraindications."
Understanding of PCC Principles	"I actively involve patients in decision-making to ensure their values and preferences are prioritized."
Ethical and Legal Knowledge	"I am aware of ethical principles, such as confidentiality and informed consent, in all aspects of patient care."
Professional and Clinical Experience	"I am confident in performing wound care and monitoring for signs of infection."
Care Environment	"I feel that my workplace supports person-centred practices through adequate resources and a positive work culture."
Person-Centred Care Process	"I am effective in educating patients about their health conditions, encouraging their involvement in self-care."
Measuring Expected Outcomes	"I document patient outcomes to evaluate the effectiveness of care in meeting individual needs."

Data Analysis

1. Content Validity Index (CVI):

Experts rating were analysed using the Content Validity Index (CVI) to determine the relevance and clarity of each item. Items with low CVI were revised or removed based on expert consensus.

2. Pilot Testing:

Descriptive statistics (mean and standard deviation) were used to assess the distribution of responses. Reliability analysis was conducted using Cronbach's alpha to evaluate internal consistency. Exploratory factor analysis (EFA) was performed to identify underlying constructs and ensure structural validity.

3. Integration of Qualitative Insights:

Qualitative feedback from pilot participants was

thematically analysed to identify common insights, informing necessary refinements to the tool.

Ethical Statement

This study adhered to ethical principles to ensure the rights and well-being of participants. Ethical approval was obtained from the Research Centre, KPJ Healthcare University (Approval Number: [EC/2022/414]), ensuring that all procedures align with both institutional and international standards for human research.

Informed consent: All participants were provided with detailed information about the study's purpose, procedures, risks and benefits. Written informed consent were obtained before participation.

RESULTS

Content Validity Index (CVI)

The item-level CVI (I-CVI) is the proportion of experts rating an item as 3 or 4 (highly relevant). A scale-level CVI (S-CVI) >0.80 is acceptable. The summary of I-CVI and S-CVI of PCCSAT are tabulated on **Table II**.

Table II: I-CVI and S-Level CVI of PCCSAT

Item's category	Item-Level CVI (I-CVI)	Scale-Level CVI (S-CVI)
Representativeness	0.80 to 1 (27 of 31 items)	>80%
Clarity	>0.8 (24 of 31 items)	>80%
Categorization	All items (except 19)	>80%

Pilot Test

Characteristics of Respondent

Thirty-three nurses participated in the study, representing diverse clinical settings. The demographic data revealed the following **Table III**.

Table III: Characteristic of Study Respondents

Characteristics	f	%
Gender		
Female	27	81.8
Male	6	18.2
Age (Years) (23)		
17-25 (Late Teenage)	2	6.0
26-35 (Early Adult)	31	93.9
36-45 (Late Adult)	-	
Education		
Diploma	30	90.9
Bachelor Degree	3	9.0
Master Degree	-	-
PhD Degree	-	-
Working Experience		
>1yr – 3yrs	9	27.3
>3yrs – 6yrs	20	60.6
>6yrs – 9yrs	4	12.1
>10 yrs	-	

Descriptive Statistical Findings

Descriptive statistics were used to examine the item distribution of the PCCSAT, serving as a foundational analysis to enhance item clarity and optimize the tool's usability. The key statistical measures included are mean, median and standard deviation, and range for each item. These values reveals insights into how participants perceived their proficiency and confidence in various care activities. **Table IV**.

Table IV:

Indications of Statistical Measures in PCCSAT

Statistical parameters	Purpose of Analysis
Mean (Average):	Indicates the overall level of agreement reported by participants for each statement. Higher means suggest a general consensus of confidence, while lower means indicate potential areas for development.
Median	Shows the central tendency, to identify whether responses cluster around a certain level (e.g., neutral or agree) without being skewed by extreme values.
Standard Deviation	A low standard deviation suggests that most respondents have similar confidence levels, while a high standard deviation indicates more varied responses, highlighting areas needing clarification or additional training.
Range (Min-Max)	Indicate the spread of responses, to pinpoint any items with particularly low or high ratings, which may indicate outlier perceptions or varying levels of confidence across respondents.

Sample descriptive statistic for each items of PCCSAT is illustrated on **Table V**.

Table V:

Sample Descriptive Statistics of PCCSAT Items

Items	Mean	Median	Std. Deviation	Range (min-max)
Basic Nursing Knowledge & Skills				
Proficient in interpreting /recording vital signs	4.2	4	0.8	2-5
Knowledgeable about medication	3.8	4	1.0	1-5
Confident in wound dressing	4.0	4	0.9	2-5
Confident in pain management	3.9	4	0.8	2-5
Effective in patient education	4.1	4	0.7	3-5

Reliability Statistical Findings

The internal reliability of the Person-Centred Care Self-Assessment Tool (PCCSAT) assessed using Cronbach's alpha to measure the consistency of the items in the tool. Results showed high internal reliability, with an average Cronbach's alpha of 0.965

Table VI: Sample Internal Consistency of PCCSAT

Observable PCC Documentation Skills	Individual's Cronbach's alpha if item deleted
Basic Nursing Knowledge & Skills	
"I am proficient in accurately interpreting and recording patient's vital signs."	.965
"I am knowledgeable about common medications, their mechanisms of action, side effects, and contraindications."	.965
Understanding of Person-Centred Care Principles	
"I understand the importance of respecting patient autonomy and involving them in decisions about their care."	.966
"I understand the ethical implications of person-centred care and strive to balance patient needs with professional responsibilities."	.965
Ethical and Legal Knowledge	
"I am knowledgeable about maintaining patient confidentiality and privacy in accordance with legal and ethical standards."	.967
"I understand the importance of obtaining informed consent and ensure that patients are fully aware of the risks and benefits of their treatment."	.967
Professional and Clinical Experience	
"I use critical thinking skills to assess patient needs, make informed decisions, and solve problems in clinical practice."	.964
"I have experience collaborating with other healthcare professionals (e.g., doctors, therapists, social workers) to provide comprehensive patient care."	.965
Care Environment	
"The care environment ensures patient privacy and comfort, with appropriate spaces for confidential conversations and rest."	.965
"The care environment is responsive to the needs of patients and their families, providing a welcoming and compassionate atmosphere."	.964
Person-Centred Care Process	
"I empower my patients to take an active role in managing their health, providing them with the tools and knowledge they need."	.965
"I provide holistic care that addresses the physical, emotional, social, and spiritual needs of my patients."	.965
Measuring the Expected Outcomes	
"I set clear, measurable goals for patient care, ensuring that both the patient and healthcare team understand the expected outcomes."	.965
"I seek patient feedback on their perceived outcomes of care, using this information to guide future care decisions."	.965
"I collaborate with the healthcare team to evaluate patient outcomes, ensuring that all perspectives are considered in the assessment."	.965

across all items (**Table VI**).

DISCUSSION

The results of this study highlighted PCCSAT tool as an effective instrument for assessing patient-centred care (PCC) practices among registered nurses. The content validation by expert panels confirmed the relevance of the tool and comprehensiveness in capturing key aspects of PCC. Expert feedback enhances the tool's clarity and applicability.

The pilot test demonstrated that the PCCSAT tool is both feasible and reliable for use in practice settings. The high Cronbach's alpha value indicated strong

internal consistency, confirming that the tool consistently measures the intended constructs. Additionally, exploratory factor analysis (EFA) revealed a clear factor structure, supporting the tool's construct validity.

Despite these strengths, the study also acknowledges several limitations. For example, the limitation of sample for the pilot test which may affect the generalizability of the findings to a broader population. Future studies should include a more diverse range of participants from various healthcare settings to confirm tool's robustness across different context.

CONCLUSION

The PCCSAT tool has proven to be a reliable and valid instrument for assessing patient-centered care (PCC) practices among registered nurses. The Cronbach's alpha for internal consistency was 0.965, indicating strong reliability across the tool's items.

While the tool shows strong potential, further research is needed to expand its use across the diverse healthcare settings and populations. Future studies should focus on validating the tool in specialized contexts, increasing sample sizes, and exploring its role in training and quality improvement initiatives.

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AUTHOR CONTRIBUTION

Yusof P: Led the study design, data collection, and manuscript writing, made significant contributions to the conception, design, execution, and interpretation of the study, reviewed and approved the final manuscript for submission and agree to be accountable for all aspects of the work.

Malek N: Assisted with literature review, manuscript drafting, and revision, made significant contributions to the conception, design, execution, and interpretation of the study, reviewed and approved the final manuscript for submission and agree to be accountable for all aspects of the work.

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